

THE JOURNAL OF HORTICULTURAL SCIENCE

166
LIBRARY USE ONLY

UNIVERSITY OF HAWAII LIBRARY

JOINT EDITORS

- P. W. TALBOYS, B.Sc., Ph.D., D.I.C., F.I.Biol., East Malling Research Station, Maidstone, Kent.
D. WILSON, B.Sc., Ph.D., M.I.Biol., Long Ashton Research Station, University of Bristol.

ASSISTANT EDITOR

- G. K. ARGLES, Dip. Hort. (Wye), A.I.C.T.A., Cherry Hill, Sutton Valence, Maidstone, Kent

PUBLICATION COMMITTEE

- Prof. L. BROADBENT, Ph.D., D.Sc., Bath University of Technology, Claverton Down, Bath.
C. H. CADMAN, B.Sc., Ph.D., F.R.S.E., The Scottish Horticultural Research Institute, Mylnefield, Invergowrie, Dundee.
E. E. CHEESMAN, D.Sc., A.R.C.S., 8 Park Road, Woking, Surrey.
Prof. O. V. S. HEATH, D.Sc., F.R.S., The University, Reading, Berks.
C. E. HUDSON, C.B.E., N.D.H., V.M.H., "Horsell", Gilbert's End Lane, Hanley Castle, Worcester.
Prof. J. P. HUDSON, M.B.E., G.M., M.Sc., Ph.D., N.D.H., Long Ashton Research Station, University of Bristol.
Prof. W. G. KEYWORTH, B.Sc., Ph.D., A.R.C.S., National Vegetable Research Station, Wellesbourne, Warwick.
T. LAFLIN, N.D.H., The National Agricultural Advisory Service at National Vegetable Research Station, Wellesbourne, Warwick.
Prof. H. W. MILES, D.Sc., Ph.D., 2 Wood Broughton, Cartmel, Grange-over-Sands, Lancashire
Sir THOMAS NEAME, M.A., V.M.H., Macknade, Faversham, Kent.
H. C. PEREIRA, Ph.D., D.Sc., F.R.S., East Malling Research Station, Maidstone, Kent.
F. A. ROACH, B.Sc., The National Agricultural Advisory Service at East Malling Research Station, Maidstone, Kent.
Prof. W. W. SCHWABE, D.Sc., Wye College, Ashford, Kent.
F. W. TOOVEY, O.B.E., B.Sc., A.R.C.S., A.I.C.T.A., Glasshouse Crops Research Institute, Worthing Road, Rustington, Littlehampton, Sussex.
F. R. TUBBS, C.B.E., M.Sc., Ph.D., Hayletts Cottage, Staithe Road, Barton Turf, Neatishead, Norwich.
G. C. WILLIAMS, N.D.H., The Glasshouse and Mushroom Advisory Unit, Campbell Road, Bognor Regis, Sussex.
Prof. D. W. WRIGHT, M.A., National Vegetable Research Station, Wellesbourne, Warwick.

VOL. 45

1970

HEADLEY BROTHERS LTD
The Invicta Press Ashford Kent
England

Per.
5B4
J68

ASSOCIATE EDITORS

- D. AKENHEAD, O.B.E., M.A., B.Sc., Three Roods, Offham, near West Malling, Kent.
- F. G. ANDERSSSEN, B.Sc., Ph.D., Department of Agriculture, Division of Horticulture, P.O. Box 994, 590 Vermeulen Street, Pretoria, South Africa.
- Prof. W. BROWN, M.A., D.Sc., F.R.S., 93 Church Road, Hanwell, London, W.7.
- M. B. CRANE, A.L.S., V.M.H., F.R.S., Firs Farm, Haughley, near Stowmarket, Suffolk.
- E. R. HOARE, B.Sc., M.I.E.E., Irrigation Research Station, Griffith, New South Wales, Australia
- T. N. HOBLYN, O.B.E., Hort. Dip., Park Cottage, Teston, Maidstone, Kent.
- Prof. H. G. H. KEARNS, O.B.E., B.Sc., Ph.D., Clive Weare House, Clewer, Wedmore Somerset.
- J. PHILP, C.B.E., B.Sc., Ph.D., Meadow House, Brook Street, Alva, Clackmannanshire.
- Sir EDWARD SALISBURY, C.B.E., D.Sc., LL.D., F.L.S., V.M.H., F.R.S., Croindene, Strandway, Felpham, Bognor Regis, Sussex.
- Prof. R. H. STOUGHTON, D.Sc., V.M.H., The Flat, Roseneath, Hook, Hants.

TABLE OF CONTENTS

JOURNAL OF HORTICULTURAL SCIENCE, VOL. 45

No. 1 (JANUARY 1970)

	PAGE
Editorial: Metrication in <i>The Journal of Horticultural Science</i>	1
Evaporation rates of capillary-watered tomatoes in an east-west glass-house. By D. W. HAND, G. SLACK and D. R. MACHIN	3-14
Strain studies in <i>Xanthomonas citri</i> (Hasse) Dowson. By ISLAM DIN KHAN and M. K. HINGORANI	15-17
The effect of early low temperature treatment on the yield of single-inflorescence tomatoes. By R. G. HURD and A. J. COOPER	19-27
The effect of (2-chloroethyl) trimethyl ammonium chloride on sex expression in cucumber (Research Note). By R. S. MISHRA and B. PRADHAN	29-31
Effect of heat-treatment for virus attenuation on tomato seed viability. By A. R. REES	33-40
Effects of warm storage of bulbs on the early flowering of "Grand Soleil d'Or" narcissi in the field. By A. R. REES and N. D. GOODWAY	41-48
Experiments on the use of calcium sprays for bitter pit control in apples. By R. O. SHARPLES and R. C. LITTLE	49-56
Influence of split and non-split applications of nitrochalk, superphosphate and sheep manure, in factorial combination, on the growth of one-year-old peach trees. By B. K. TAYLOR and B. VAN DEN ENDE	57-68
Root-differentiating properties of some glycosides and polycyclic phenolic compounds found in apple and pear fruits. By P. A. POAPST, A. B. DURKEE and F. B. JOHNSTON	69-74
Virus, fertilizer and rootstock effects on the growth and precocity of young apple trees. By A. I. CAMPBELL and C. BOULD	75-85
Hardening of iris bulbs for hot-water treatment. By HILLELA VIGODSKY	87-97

No. 2 (APRIL 1970)

Growth, flowering and fruiting of cacao under controlled soil moisture conditions. By P. J. M. SALE	99-118
Growth and flowering of cacao under controlled atmospheric relative humidities. By P. J. M. SALE	119-132
Some aspects of developmental physiology of the mango fruit. By S. LAKSHMINARAYANA, N. V. SUBHADRA and H. SUBRAMANYAM	133-142
Eradicant action of fungicides applied to dormant peach trees for control of brown rot (<i>Monilinia fructicola</i>). By PHILLIP F. KABLE	143-152
A seasonal pattern of apple root growth in Western Australia. By J. E. L. CRIPPS	153-161
Alcohol-insoluble-solids and dry-matter contents in the assessment of quality and maturity in French beans. By KATHLEEN D. GARDINER	163-174
Effects of temperature, chilling and treatment with gibberellins on the germination of <i>Primula</i> species. By P. A. THOMPSON	175-185
Response of the cultivated mushroom to temperature during the two-week period after casing. By P. B. FLEGG	187-196

Sorbitol in stored apples. By J. C. FIDLER and C. J. NORTH	197-204
✓ Rapid clonal multiplication of cauliflower by shake culture (Research Note). By D. G. A. WALKER and JUDITH M. G. WOOLFITT	205-206

No. 3 (JULY 1970)

Capillary irrigation: the effect of soil volume on tomato production. By D. A. WELLS and J. D. POSTLETHWAITE	207-214
The relation of achene number to berry weight in strawberry fruit. By A. J. ABBOTT, G. R. BEST and R. A. WEBB	215-222
Use of 2-chloroethane phosphonic acid to promote the abscission and ripening of fruit of <i>Coffea arabica</i> L. By G. BROWNING and M. G. R. CANNELL	223-232
Tulip fire caused by <i>Botrytis tulipae</i> (Lib.) Lind.; the leaf spotting phase. By D. PRICE	233-238
Black currant breeding: A progeny test of four cultivars and a study of inbreeding effects. By D. WILSON	239-247
The breeding of Avonresister, a canker-resistant parsnip. By A. G. CHANNON, B. D. DOWKER and H. HOLLAND	249-256
✓ Some observations on the growth and development of sweet potato (<i>Ipomoea batatas</i>). By M. E. AUSTIN, L. H. AUNG and B. GRAVES	257-264
Flower pigment composition of natural bud-variants among hybrid Chinese azaleas, <i>Rhododendron simsii</i> (Planch.). By R. DE LOOSE	265-274
Factors affecting flower initiation in the black currant, <i>Ribes nigrum</i> (L.). By I. G. TINKLIN, E. H. WILKINSON and W. W. SCHWABE	275-282
Loss of volatiles by apples in cool storage: a differential response to increased water loss. By R. B. H. WILLS and W. B. MCGLASSON	283-286
Virus, fertilizer and rootstock effects on the nutrition of young apple trees. By C. BOULD and A. I. CAMPBELL	287-294
Effect of virus diseases on the latex and sugar contents of papaya fruits (Research Note). By S. M. PAUL KHURANA	295-297
Effect of seed weight on lettuce growth (Research Note). By M. A. SCAIFE and D. JONES	299-302

No. 4 (OCTOBER 1970)

Seed percentage, seed length and shear press values in the evaluation of quality and maturity in French beans. By KATHLEEN D. GARDINER and MARIA D. PRENDIVILLE	303-314
Effects of gibberellic acid and temperature on the growth of young seedlings of <i>Syringa vulgaris</i> L. By OLAVI U. JUNTILA	315-329
Response of gladiolus corms to hot water treatment. By HILLELA VIGODSKY	331-339
Changes in the level of acidic and neutral growth promoters during fruit development in Dashehari mango (<i>Mangifera indica</i> L.). By ELIAS K. CHACKO, RAJ B. KACHRU and R. N. SINGH	341-349
The molybdenum requirement of plants in relation to nitrogen supply. By E. J. HEWITT and C. S. GUNDRY	351-358
Effects of soil moisture regimes on leaf water deficit, transpiration and yield of tomatoes. By P. D. WAISTER and J. P. HUDSON	359-370
Gibberellin-like substances in developing fruits of the mango (<i>Mangifera indica</i> L.). By ELIAS K. CHACKO, R. N. SINGH and RAJ B. KACHRU	371-378

The response of black currants to different soil moisture conditions and two levels of nitrogenous fertilizer. By J. E. GOODE and K. J. HYRYCZ	379-391
Gibberellin A ₃ modification of vegetative growth and flowering of dwarf tomatoes. By L. H. AUNG and M. E. AUSTIN	393-400
The nutrition of glasshouse carnations. By G. W. WINSOR, M. I. E. LONG and BRENDA M. A. HART.. .. .	401-413
Fruit set in grape vines: the mechanism of the CCC effect. By B. G. COOMBE	415-425
Effect of 2-chloroethanephosphonic acid (Ethrel) on health, dormancy, and flower and corm yield of gladioli. By A. H. HALEVY, RUTH SHILO and S. SIMCHON	427-434
Effects of shelter from wind on the growth and yield of raspberries. By P. D. WAISTER	435-445
Factors affecting the control by hot water treatment of stem nematode <i>Ditylenchus dipsaci</i> (Kühn) Filipjev in narcissus bulbs. By A. L. WINFIELD	447-456
Systematically arranged fertilizer experiments. By T. J. CLEAVER, D. J. GREENWOOD and J. T. WOOD	457-469
Some studies on the cuticular wax of citrus fruits. By Y. SCHULMAN and S. P. MONSELISE	471-478

